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## ABSTRACT OF THE INVENTION

The invention relates to fluorescence calibration devices and methods that can mimic skin and other tissues. A calibration device of the invention comprises at least one scattering layer, which is preferably non-fluorescent, and a second layer containing one or more fluorophore. Light passes through the scattering layer and excites the fluorophore. Light emitted from the fluorophore passes back though the scattering layer and into collecting optics, which can be measured and that measurement used to correct for instrument drift.